DELHI METRO RAIL CORPORATION LTD.
(A Joint Venture of Govt. of India & Govt. of NCT, Delhi)

“Supply, Installation & Commissioning of Earth Pits and Earth Strips at various Sub-Stations of Delhi Metro Rail Corporation Ltd.”

VOLUME-I

* NOTICE INVITING TENDER
* SCOPE OF WORK
* TENDER PRICES AND SCHEDULE OF PAYMENT

No. DMRC/O&M/APL/Earth Pits & Strips/ETR0012016
SECTION 1
NOTICE INVITING TENDER (e-TENDER)

1.1 GENERAL
Delhi Metro Rail Corporation (DMRC) Ltd. Invites sealed open e-Tenders (two bids) from eligible applicants, who fulfill the qualification criteria as stipulated in clause no. 1.2 of NIT, for the work, “Supply, Installation & Commissioning of Earth Pits and Earth Strips at various Sub-Stations of Delhi Metro Rail Corporation Ltd.”

1.1.1 The details of the Tender are as per following:

<table>
<thead>
<tr>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Approximate cost of work</td>
<td>₹ 31,99,409.00 (inclusive of all taxes)</td>
</tr>
<tr>
<td>Tender Security amount</td>
<td>₹ 63,988.00</td>
</tr>
<tr>
<td>Cost of Tender (Non-Refundable)</td>
<td>₹ 5,250.00 (₹ 5,000/- plus 5% VAT) Non-Refundable</td>
</tr>
<tr>
<td>Completion period of the Work</td>
<td>12 months (from 10th day of issue of letter of acceptance)</td>
</tr>
<tr>
<td>Tender documents on sale</td>
<td>From 13.06.2016 to 09.07.2016 (up to 17:00 hrs) on e-tendering website <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a></td>
</tr>
<tr>
<td></td>
<td>Tender document can only be obtained after registration of tenderer on the website <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a></td>
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<th>Details</th>
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<tbody>
<tr>
<td>Pre-bid Meeting</td>
<td>N/A</td>
</tr>
<tr>
<td>Last date of Seeking Clarification</td>
<td>28.06.2016 up to 15:00 hrs. (Queries from bidders after due date shall not be acknowledged)</td>
</tr>
<tr>
<td>Last date of Issuing Addendum / Corrigendum</td>
<td>01.07.2016 up to 15:00 hrs.</td>
</tr>
<tr>
<td>Last Date &amp; time of Submission of Tender Online</td>
<td>09.07.2016 up to 17:00 hrs.</td>
</tr>
<tr>
<td>Date &amp; time of opening of Technical Bid Online</td>
<td>12.07.2016 at 11:00 hrs.</td>
</tr>
<tr>
<td>Date &amp; time of opening of Financial Bid Online</td>
<td>Shall be informed after evaluation of technical bid through website <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a></td>
</tr>
<tr>
<td>Authority and place for submission of tender cost, tender security, required documents (if any), seeking clarifications etc.</td>
<td>Additional General Manager/Traction, 2nd Floor, Metro Bhawan, Fire Brigade Lane, Barakhamba Road, New Delhi-110001.</td>
</tr>
</tbody>
</table>

The tender cost and tender security will be in the form of a Demand draft/ Banker’s cheque drawn on a scheduled Commercial Bank based in India and should be in favour of “Delhi Metro Rail Corporation Ltd.”, payable at New Delhi.

The same should be submitted in original upto before two hours of opening of technical bid in the office of AGM/TR at the above mentioned address.

NOTE: The bidder who fails to submit the tender cost & tender security (in original) within stipulated schedule deemed to be rejected.
1.2 MINIMUM ELIGIBLE CRITERIA:

1.2.1 Work Experiences -

a) The tenderers will be qualified only if they have completed work(s) during last five years ending on the last day of the previous month of tender submission (i.e. May-2016) as given below:

   a. One single work of "similar nature" of at least 80% of estimated value of contract.

   OR

   b. Two works of "similar nature", each of at least 50% of estimated value of contract.

   OR

   c. Three works of "similar nature", each of at least 40% of estimated value of contract.

The contractors have completed the above works in Govt. / Semi Govt. / PSU / Private Metro Railway Organization.

*Similar Nature of Work: "Installation and Commissioning or Repair of Earth Pits".*

**NOTE:**

1. Successful completed portion of ongoing works up to May-2016 shall also be considered for qualifying the eligible criteria.

2. Following documents shall be considered for evaluating the criteria of work experience:

   a. Self-attested copies of work order, BOQ along with completion certificate (indicating the name of work, final amount, quantity of work, completion date etc.) issued by the client preferably on their letter head for completed work.

   b. Self-attested copies of work order, BOQ and latest certificate issued by along with completion certificate issued by the client preferably on their letter head for quantum of work executed for work under progress.

1.2.2 Financial Standings -

a) Contractor's average Annual Turnover of last three audited financial years should be equal to or more than 80% of estimated cost of work.

b) Self-attested copies of VAT / Service Tax registration certificate, PAN No.

c) Applicant must not have been blacklisted or deregistered by any Govt. or public sector undertaking during last five years. It should be on non-judicial stamp paper of Rs. 10/- duly attested by Notary, in the format enclosed in *Annexure - D.*

d) Net worth of applicants should be positive. Tenderer shall submit last three years audited financial statement duly attested by certified CA to work out net worth.

Documentary proof of satisfying eligibility conditions and audited financial data to be furnished along with the application on printed letter heads. Testimonials of satisfactory completion should be obtained from an officer not below the rank of executive engineer.
1.2.3 The tender submission of bidders, who do not qualify the minimum eligibility criteria, shall not be considered for further evaluation and considered rejected. The mere fact that the bidder is qualified as mentioned in above shall not imply that his bid shall automatically be accepted. The same shall be subject to the data as required for consideration of tender prescribed in the ITT.

The mere fact that the tenderer is Pre-qualified as shall not imply that his bid shall automatically be accepted. The same should contain all Financial & other details as required for the consideration of tender.

1.2.4 Tender document consists of the following documents:

**VOLUME-I**

a. Notice Inviting Tender  
b. Scope of Work  
c. Tender Prices and Schedule of Payment

**VOLUME-II**

a. Instructions to Tenderers  
b. Format of forms  
c. Special Conditions of Contract  
d. Other terms and conditions  
e. Contents of BOQ.

1.2.5 The contract shall be governed by the documents listed in Para 1.2.4 above.

Please note carefully the requirements for submitting tenders and the date & time for submittal.

1.3 The bidders may obtain further information / clarification, if any, in respect of these tender documents from the office of Additional General Manager /Traction, 2nd Metro Bhawan, Fire Brigade Lane, Barakhamba Road, New Delhi-110001

1.4 The intending bidders must be registered on e-tendering portal https://eprocure.gov.in/eprocure/app. Those who are not registered on the e-tendering portal shall be required to get registered beforehand. If needed they can be imparted training on ‘online tendering process’. After registration the tenderer will get user id and password. On login tenderer can participate in tendering process and can witness various activities of the process.

1.5 The authorized signatory of intending bidder, as per Power of Attorney (POA), must have valid class-III digital signature. The tender document can only be downloaded or uploaded using Class-III digital signature of the authorized signatory.

1.6 Tender submissions will be made online after uploading the mandatory scanned documents towards cost of tender documents such as Demand Draft or Pay Order or Banker’s Cheque from a Scheduled commercial bank based in India and towards Tender Security such as Bank Guarantee or Demand Draft or Pay Order or Banker’s Cheque from a Scheduled commercial bank based in India and other documents as stated in the tender document.

1.7 Tenders shall be valid for a period of as per ITT clause 12.0 from the date of submission of Tenders.

1.8 Tenderer is cautioned that the tender containing any material deviation from the tender document which consists of NIT, Instructions to tenderers, General conditions of contract, Special conditions of contract, Bill of quantities is liable to be summarily rejected as non-responsive.
1.9 DMRC reserves the right to accept or reject any or all proposals without assigning any reasons. No tenderer shall have any cause of action or claim against the DMRC for rejection of his proposal.

1.10 Tenderers are advised to visit the site before offering their rates.

1.11 The bidders are advised to keep in touch with e-tendering portal https://eprocure.gov.in/eprocure/app for updates. Any corrigendum, addendum etc issued shall be part of this tender document and shall be made available on this e-tendering portal.

1.12 Late tenders (received after date and time of submission of bid) shall not be accepted under any circumstances.

(SUBODH PANDEY)
AGM / Traction
Delhi Metro Rail Corporation Ltd
2nd floor, Metro Bhawan,
Fire Brigade Lane,
Barakhamba Road,
New Delhi-110001
INFORMATION AND INSTRUCTIONS FOR "ONLINE BID SUBMISSION"

The intending tenderers must read the terms and conditions carefully and should only submit his tender if he considers himself eligible and he is in possession of all the documents required.

Information and instructions for tenderers posted on the website shall form part of tender documents. The complete Tender Document can only be obtained online after registration of tenderer on the website http://eprocure.gov.in/eprocure/app.

Tender can only be submitted after uploading the mandatory scanned copy of documents such as Demand Draft or Pay Order or Banker’s towards cost of Tender Documents and Tender Security (as prescribed in clause 1.1.1 of NIT).

The bidders are required to submit soft copies of their bids electronically on the Central Public Procurement (CPP) Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at: https://eprocure.gov.in/eprocure/app.

REGISTRATION

1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: https://eprocure.gov.in/eprocure/app) by clicking on the link “Online bidder Enrollment” on the CPP Portal which is free of charge.

2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.

3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.

4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.

5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC’s to others which may lead to misuse.

6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

SEARCHING FOR TENDER DOCUMENTS

1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.

2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My
Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.

2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” or “Other Important Documents” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

1) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.

2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.

3) Bidder has to select the payment option as “offline” to pay the tender fee / EMD as applicable and enter details of the instrument.

4) Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.

5) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been
completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.

6) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

7) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.

8) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

9) Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

10) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS

1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

3) For any Technical queries related to Operation of the Central Public Procurement Portal Contact at:

   Mobile Numbers: 91 7878007972, 91 7878007973, 91 7574889871, 91 7574889874, 91 8826246593

   Telephone Numbers: The 24x7 Toll Free Telephonic Help Desk Number 1800 3070 2232. Other Tel: 0120-4200462, 0120 4001002

   Email Id: cppp-nic@nic.in
SECTION 2

SCOPE OF WORK

The contractor will execute the work i.e. "Supply, Installation & Commissioning of Earth Pits and Earth Strips at various Sub-Stations of Delhi Metro Rail Corporation Ltd."

2.1 Brief Scope

a) The brief scope of work shall be carrying out necessary excavation, providing and fixing of earth electrode with GI pipe and funnel and filling of soil enhancement material (soil enhancement material shall be provided by DMRC), construction of earth pit chambers/collar, Providing earth pit cover, painting of earth pit covers, measurement of earth pit resistance and connecting the earth pit to existing earth grid/equipments as per IS-3043.

b) The necessary tools, tackles, material and labour required for all the works mentioned hereunder to complete the works upto the satisfaction of DMRC engineer is in the scope of the contractor. No additional payment will be made for the same.

c) New earth strip connection to existing earth pit/equipments shall be carried out during night hour (00:30Hrs to 05:00Hrs) under direction of engineer-in-charge. Contractor may also note that in receiving sub stations, some other work may also need to be carried out in night hour due to surrounding high voltage structures for running of trains.

2.2 EXCAVATION OF EARTH PITS:

The job includes excavation of hard / soft soil of 3 metres (Depth) & 0.5 metres (diameter) in a safe way so as to not damage existing earth strip/earth grid located underneath soil. Excavation shall be carried out by means of manual digging the soil where ever is practicable or by drilling. After excavation broken lumps and stones are to be removed from the earth pit.

2.3 PROVIDING AND FIXING OF EARTH ELECTRODE:

a) The job includes providing of 50 mm diameter NB class B GI pipe of 3 meters length. Bottom portion of the GI earth electrode is to be made sharp for easy penetration into the soil.

b) GI Earthing strip of 300 mm (Length) x 6 mm (Thickness) x50 mm (Width) bent to the shape of the pipe and welded at 75 mm from top portion of GI earth electrode. Tapped holes of 10 mm diameter shall be provided on the GI earthing plate for connecting earthing strips to the earth electrode.

c) Funnel with a mesh shall be provided on the top portion of the earth electrode for watering purpose.

d) GI earthing plate welded to the earth electrode at the top shall have hot dip galvanized coating of not less than 10 microns thickness.

2.4 FILLING OF SOIL ENHANCEMENT MATERIAL:

The job includes filling up of the space around pipe electrode with slurry of soil enhancement material after placing the pipe electrode in the excavated earth pit.

2.5 CONSTRUCTION OF EARTH PIT Chamber/Enclosure/Collar:

For new earth pits, the job includes providing/constructing earth pit chambers/collar. Height of the earth pit chamber should be 500 mm from the ground level. In ASS, Earth pit chamber and cover should be at finished grade level so as to not hinder public/commuter movement at stations while at RSS these can be protruding type also.

For existing old earth pits, the job includes dismantling of old/damaged chamber and clearing up of pit area and then SITC of RCC chamber/enclosure of size 50cmx50cmx50cm, thickness-10cm with concrete garde M30.

2.6 PROVIDING EARTH PIT COVERS:

For new earth pits:

a) The job includes providing RCC covers on the top portion of the earth pit chamber with suitable handle for lifting arrangement at auxiliary substations-ASS and depot.
b) The job includes painting of earth pit cover. The earth pit is also to be provided with earth pit display board having identification number as per existing practice. Inside portion of the pit shall be cleaned properly.

For existing old earth pits:

a) The job includes providing RCC covers (Size 50cmx50cm, thickness 08cm, concrete grade M30) on the top portion of the earth pit chamber with suitable handle for lifting arrangement at auxiliary substations-ASS and depot.

b) The job includes painting of earth pit cover. The earth pit is also to be provided with earth pit display board having identification number as per existing practice. Inside portion of the pit shall be cleaned properly.

2.7 IDENTIFICATION OF EARTH PITS:

Earth pit Display boards on top of a iron rod duly painted consisting of earth pit number, individual pit resistance, due date for measurement and name of location on the display board shall be provided by the contractor for each individual earth pit.

2.8 MEASUREMENT OF EARTH PIT RESISTANCE:

a) The job includes measurement of resistance of the new earth pits when connected to grid as well as individually.

b) The values will be tabulated and submitted to DMRC engineer.

c) If the individual earth pit resistance is more than 8 ohm then suitable steps shall be taken to bring it under the limit.

2.9 SUPPLY & LAYING OF EARTH STRIP:

Supply & Laying of 50x6 mm GI earth strip in various ASS & RSS of DMRC.

a) The new earth pit is to be connected with the adjacent earth pit / main earth grid with 50 mm x 6 mm GI earth strip to/form the earth grid.

b) All hardware (nut, bolt & washer etc.), used for connection/joints except where welding is done, shall be made of stainless steel (SS).

c) Joints and tapings in the main earth loop shall be made in such a way that reliable and good electrical connections are permanently ensured. All welded joints shall be suitably protected by applying bitumen and red oxide paint.

d) The earth strip should be laid in at a depth of 150 mm from ground level after excavation of soil and same to be connected to equipments/earth grid. After laying of earth strip, concrete floor/brick floor shall be restored for finish floor. At some locations (like-Wall and roof etc.) earth strip shall be fixed/clamped to the surface instead of burying in soil.

2.10 General:

a) The quantity of earthstrip to be laid at each location will be as per the direction of DMRC engineer.

b) Jointing of new earth strip/earth pit with existing earthing network shall be carried out in power block condition under supervision of DMRC engineer.

c) Welding should be free from defects; the joint is to be properly cleaned. Bituminous coating and red oxide paint shall be applied after welding of earth stip.

d) Bolting of earth strips to be done at end of connecting earth strip to earth pit and also at the other end where earth strips are connected to equipments/structures etc.

e) Since the work is to be done in substations located around DMRC lines in NCR region therefore Deployment of men, transportation of man & machinery, consumables, welding equipment, drilling machine to various locations necessary for carrying out the job comes under contractor’s purview. Power supply, if already available at site, shall be provided to contractor free of cost however if not available then contractor shall make arrangement of power supply at his own cost. Diesel / Petrol
for running the mobile DG set used for welding is in the scope of the contractor.

f) The necessary tools and tackles, material and labour required for connecting new earth pits to adjacent pits / main earth grid is in the scope of the contractor. No additional payment will be made for the same.

g) The contractor at his own cost can visit DMRC sites, before quoting for the tender.

h) The contractor is responsible for any damage caused while carrying out earth pit jobs.

1) Drains, pipes, electrical cables, telephone cables, and similar services encountered in the course of the works shall be guarded from injury by the contractor at his own cost, so that they may continue in full and uninterrupted us to the satisfaction of the owners thereof or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.

2) Should any damage be done by the contractor to any mains, pipes cables or lines (whether above or below ground etc) whether or not show on the drawings the contractor must make at his cost good the damage without delay to the satisfaction of the engineer-in-charge.

i) Permissions

While doing the work, it is the responsibility of the contractor to take all the necessary permissions/permits from the DMRC engineer of the site.

j) The work is to be carried out on near Live High voltage bus bars/lines, contractor has to follow all safety rules & regulations etc. and guide his manpower for safe working.
SECTION 3

TENDER PRICES AND
SCHEDULE OF PAYMENT

3.1 Tender Prices

3.1.1 a. unless explicitly stated otherwise in the Tender Documents, the contractor shall be responsible for the whole works, based on the Bill of Quantities and payment shall be as per accepted rates based on the activities carried out as in the BOQ.

b. The rate quoted by the tenderer shall be inclusive of all duties, taxes, fees, octroi and other levies, materials, labour to & fro transportation of material and labour charges etc. Service Tax, however shall be shown separately in the BOQ.

3.1.2 Schedule of Payment

A) No mobilization advance is payable to contractor for the said work.

B) Payment shall be made through running bills and final bill as per progress of work. Minimum work for R/A bills shall be 30% of total contract amount.

C) The payment shall be made subjected to submission of jointly signed report of DMRC Engineer in charge & your representative.

D) Payment shall be subjected to deduction of all T.D.S as per applicable law.

E) Joint report with concerned officer / staff shall be made in triplicate duly signed by field staff and concerned officer. Bill along with copy of joint report shall be submitted to MGR/TR-AP for verification and processing the bill for payment.